Recent Meeting


In response to perceived declines in the numbers of the houbara bustard (Chlamydotis undulata macqueeni) - caused by habitat loss and over-hunting - the Saudi Arabian Minister of Foreign Affairs, HRH Prince Saud Al Faisal, initiated one of the Kingdom’s first species conservation programmes in 1986. By the end of 1987, the National Commission for Wildlife Conservation and Development (NCWCD) had been created in Riyadh, and the Harrat al-Harrah protected area of over 12,000km² had been established to protect remnant breeding populations of houbara in the north of the Arabian Peninsula. Working under the auspices of the NCWCD, the National Wildlife Research Center (NWRC), near the city of Taif, had begun an ambitious captive-breeding project for the houbara.

By 1992, the NWRC had achieved the production of a self-sustaining, captive houbara population, and the provision of an annual surplus of houbara chicks for re-introduction experiments. The first soft-release trials began in 1992 in the 2,200 km², fenced Mahazat As Said protected area. To date, six houbara have established themselves in the protected area outside the pre-release enclosure and twenty birds remain in the vicinity of the pre-release enclosure. Up to 100 houbara will be available for release into Mahazat in 1994. With the focus shifting towards the release of captive-bred houbara, the NCWCD decided it was time for the houbara conservation programme in Saudi Arabia to be reviewed critically.

Between 29 September and 3 October, the NCWCD hosted a seminar on the restoration of houbara bustard populations in Saudi Arabia. The venue was the NWRC in Taif. The seminar consisted of two days of formal presentations by researchers from Saudi Arabia and by nine invited speakers from Britain, USA, Germany, New Zealand, Russia and Kazakhstan. Talks by local staff covered all aspects of the houbara programme in Saudi Arabia including: the status and distribution of wild populations, techniques for houbara propagation, the first results of release trials, and houbara predator and disease problems. Invited speakers gave results from their own work dealing with such topics as: the status of the houbara in the former USSR, foster adoption release of the masked bobwhite quail (Colinus virginianus ridgway), rearing gamebirds for release in Britain, predator management as a component of bird recovery programmes in New Zealand, habitat management for European bustards, and the use of radio-tagging in the release of raptors and gamebirds. On the third day, a field trip to the houbara release site in Mahazat As Said was undertaken. The fourth day was devoted to the drafting of recommendations for a Saudi Arabian houbara conservation policy, and a series of technical recommendations for houbara captive-rearing and release. On the fifth and last day, all seminar participants travelled to Riyadh where the recommendations were presented and discussed.

The conservation policy recommendations affirmed the general aim of securing self-sustaining wild populations of houbara bustards, and identified eight primary objectives and 22 associated tasks. Proposed objectives were:

1. To survey the houbara throughout its range in Saudi Arabia and establish monitoring programmes, in order to determine the status and trends of key populations;
2. To understand the houbara’s ecology and threats to its survival, so that appropriate management techniques may be formulated;
3. To develop appropriate management techniques and training, so that research recommendations may be implemented;
4. To establish and manage a network of suitable habitats where houbara populations may be sustained;
5. To maintain a captive population of houbara for possible releases, to augment or establish wild populations, and to assist research;
6. Where necessary, to augment wild populations and to establish new populations of houbara through direct translocation of wild birds;
7. To increase awareness among hunters of problems facing houbara and to encourage their participation as partners in conservation measures;
8. To promote public awareness about houbara conservation, through education programmes and the facilitation of public participation in conservation activities in Saudi Arabia and elsewhere.
Returning Invertebrates to the Wild

West Indian Top-shell in Bermuda

The West Indian top-shell (Cittarium pica) is a cricket-ball sized, marine gastropod which lives in the intertidal zone of exposed or partly sheltered coast lines, and grazes on algae. It ranges throughout the Caribbean basin, the Bahamas, and formerly southern Florida and Bermuda. As an edible shellfish resource, it is second in importance only to the conch within its home range and has suffered serious declines or extermination in some areas due to over harvesting.

On the oceanic island of Bermuda, located at 32°N, 64°W at the northern extremity of its range, the species was formerly common, as evidenced by the abundance of shells in fossil and recent marine deposits. Moreover, historic accounts confirm that it survived, and was harvested as a food resource, well into the period of permanent human settlement which began in 1609. By the time scientific documentation of Bermuda's natural history began in the mid-nineteenth century, however, live specimens could no longer be found and scientists speculated whether this die-out was natural, due to some climate extreme at this northern limit of the range, or the result of over-harvesting by humans. One indirect casualty of this extirpation has been the land hermit crab (Coenolites clypeatus), which uses the empty top-shells almost exclusively as "home" in its adult stage. Although still extant on Bermuda, it has become extremely rare and localised.

Attempts to re-introduce the top-shell began as early as 1901, but were not scientifically monitored and may have failed due to placement of shells in unsuitable (sheltered harbour) habitat. In July 1982, another re-introduction effort was initiated, using the 82 sub-adult shells obtained by Mr. Teddy Tucker from East Cay, Turks Island. After quarantine observation by the Fisheries Department, the shells were released in the intertidal zone of the 6-hectare Nonsuch Island Living Museum Nature Reserve in Castle Harbour, as part of a comprehensive project to restore Bermuda's pre-colonial heritage. This time the results were carefully monitored and successful reproduction was confirmed in 1986.

Top-shells are dioecious, but fertilisation occurs externally by release of eggs and sperm into the water. The eggs hatch to produce a planktonic "veliger" stage, which drifts briefly in the tidal currents before settling out in suitable habitat to transform into a shell. The shells grow rapidly over a period of six years before approaching their maximum size at 120mm and weight at 570gm, but they attain reproductive capability in their third or fourth year. Apart from humans, the only significant predator of adult shells is the octopus.

Seventy top-shells survived the trauma of the 1982 translocation and grew rapidly to full size over the next six years, with an annual attrition rate of 8% per annum after 1982, which was attributed mainly to octopus predation.